REMARKS

Claims 1-46 have been presented in this application. Claims 16-27 are withdrawn, Claims 28-37 are canceled and Claims 1 and 38 have been amended herein. In view of these amendments and the accompanying remarks, Applicants respectfully request withdrawal of the rejections, reconsideration and allowance of all pending claims.

In the Office Action mailed March 25, 2005, each of the pending claims was rejected. Each of these rejections is hereby respectfully traversed.

Specifically, Claims 38-43 and 47 were rejected under 35 U.S.C. §102(e) as being anticipated by Hamamoto (US 6,521,938). It is respectfully submitted the claims as originally filed, and as clarified herein, are allowable over the references of record.

Claim 38 is amended herein and as amended, recites in part:

> ...removing the insulating material that is exposed by the line mask to create at least two recesses, the at least two recesses being adjacent the sides of and separated by an interposed structure that was exposed by the line mask, each of the recesses exposing a conductive region adjacent the interposed structure;
>
> forming a conductive material within the at least two recesses and overlying the interposed structure and disposed adjacent the sides and top of the interposed structure, the conductive material electrically connecting the conductive regions exposed by the recesses; and...

Applicants respectfully submit that the elements of Claim 38, and in particular the steps recited above, are not shown, taught or suggested by the reference. Hamamoto depicts a layer 6 that is the bit line for the memory device. Layer 6 overlies contact holes 51 to the source regions 23 of transistors, which are filled with conductive material. (*Col. 10, lines 15-20*). This structure thus uses conventional contact holes and vias to contact the surface of the substrate. These are the structures described in Applicant's description of the prior art approach for making such contacts (see for example in the last sentence of paragraph 27 of the present application)

and this prior art approach requires that the material in the contact holes be processed exactly and that the contact to the bit line 6 be made for each one of the vias to ensure proper operation. Further, Hashimoto forms a via filled with conductive material on one side of a gate stack only, and the top and the other side is covered with an insulator material 2.

In contrast, Claim 38 requires that the conductive material fill the recesses that were formed using a line mask. These recesses are adjacent each side of an interposed structure and is disposed adjacent the sides and top of the structure. This approach allows for an easily fabricated conductor line to be placed over the conductive material and as described in paragraph 27 of the Application. This approach also removes the exacting requirements for processing of the prior art for correct electrical operation, by advantageously providing multiple areas for the bit line to electrically connect to the conductive material and, thus, to the surface of the substrate.

Hamamoto depicts only the use of contact holes and vias in selected areas on one side of the gate contacts, the top and other side are covered with insulator material and, thus, the reference does not show, teach or suggest the above recited elements of Claim 38. Applicants conclude that Claim 38 is unanticipated by and unobvious over the reference. Reconsideration and allowance are therefore respectfully requested for Claim 38.

Claims 39-43 and 47 depend from and recite additional method steps on the method of Claim 38. As the parent claim is believed to be allowable, these dependent claims are also believed to be allowable, and reconsideration and allowance are, therefore, respectfully requested.

Claims 1-5, 8, 44 and 45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Hamamoto in view of Sung et al, U.S. Patent No. 5,814,862. This rejection is also respectfully traversed.

Claim 1 is amended herein similar to the amendments made to Claim 38, and now recites in part:

> ...depositing a conductive material to fill the recesses and to cover the gate contacts such that a continuous conductive layer of the conductive material fills a first recess adjacent one side of at least one gate contact, extends over the top of the gate contact, and fills a second recess adjacent an opposing side of the gate contact; and...

Claim 1, as amended, requires a conductive material to fill a recess adjacent one side of a gate contact, extend over the top of the gate contact, and fill a second recess adjacent the opposing side of the gate contact. Hamamoto, as described above, provides a contact hole which is adjacent one side of a gate contact, the top and opposing side are covered in insulator material. Thus, as argued above with respect to Claim 38, Hamamoto cannot provide the advantageous method of Applicants' claimed invention. Sung et al., which was cited in the previous Examiners' Action, also cannot provide the elements missing from Hashimoto as Sung et al. does not teach a conductive material that covers a gate contact. Thus, neither of the relied upon references, nor the combination suggested by the Examiner, shows, teaches or suggests the advantageous method steps of Applicants' Claim 1. Accordingly, reconsideration and allowance is respectfully requested.

Claims 2-5 and 8 depend from and include the allowable method steps of Claim 1 and are, therefore, believed to be allowable. Claims 44-45 depend from and include the allowable method steps of Claim 38, argued above, and are also believed to be allowable over the rejection. Reconsideration and allowance are respectfully requested.

Claims 9 and 46 were similarly rejected under 35 U.S.C. §103(a) as being unpatentable over Hamamoto and Sung et al. in view of Nitayama et al., U.S. Patent No. 6,236,079.

The Examiner cites the Nitayama et al. patent as providing a missing element from the combination of Hamamoto and Sung et al., e.g., using tungsten as the refractory metal. However, Claims 9 and 46 depend from Claims 1 and 38, directly or indirectly, and each of the parent claims is believed to recite method steps that are allowable over the combination of Hamamoto and Sung et al. as argued above. The Nitayama et al. reference does not cure the defects of the earlier combination. Accordingly, these dependent claims depend from and incorporate methods of allowable parent claims and are, therefore, likewise believed to be allowable. Reconsideration and allowance is respectfully requested for these claims as well.

Claims 10, 11 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hamamoto and Sung et al. in view of Parekh et al., U.S. Patent No. 6,383,868. This rejection is also hereby respectfully traversed.

The Examiner remarks that Parekh et al. is cited to provide the missing element of forming doped polysilicon. However, Claims 10, 11 and 14 depend from Claim 1, directly or indirectly, and the parent claim recites method steps that are allowable over the combination of Hamimoto and Sung et al. as argued above. The addition of the Parekh et al. reference does not cure the defects of the earlier combination. Accordingly, these dependent claims depend from and incorporate methods of allowable parent claims; are not shown, taught or suggested by any of the references singularly nor by the combination, and are, therefore, likewise believed to be allowable. Reconsideration and allowance is respectfully requested for these claims as well.

Claims 12 and 13 are likewise rejected under 35 U.S.C. §103(a) as being unpatentable over Hamamoto, Sung et al., Parekh et al. combined in view of Taniguchi et al., U.S. Patent No. 6,690,050. This rejection is also hereby respectfully traversed.

The Examiner remarks that this new reference is added to provide the missing elements of providing amorphous silicon and annealing the amorphous silicon. Again, the rejected dependent claims depend, directly or indirectly, from Claim 1 that is now believed to be allowable. The added reference does not show, teach or suggest the steps of Claim 1 and, thus, the dependent claims which incorporate these allowable method steps, are also believed to be allowable. Accordingly, reconsideration and allowance are respectfully requested.

Claims 6 and 7 are likewise rejected under 35 U.S.C. §103(a) as being unpatentable over Hamamoto, Sung et al., combined in view of the textbook to Wolf et al, Silicon Processing for the VLSI Era, Vol. 1, (1986). This rejection is also hereby respectfully traversed.

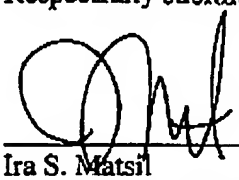
The Examiner admits that the combination of Hamimoto and Sung et al. does not provide the required elements of a precursor layer at least 1000 Angstroms thick. Wolf et al. is said to teach forming the layer, which is not disputed. The Examiner then remarks that the claimed thickness is obvious, as a matter of design choice.

Applicants submit, without addressing whether the Examiner is correct in alleging the thickness is obvious under 103 due to the design choice argument, that these claims also depend from, directly or indirectly, Claim 1, which is allowable, and that the added references do not provide the novel method steps recited in Claim 1 and, therefore, are also incorporated into these dependent claims. Accordingly, reconsideration and allowance is respectfully requested.

Applicants believe that each of the pending claims is now allowable. Applicants, therefore, respectfully request that the rejections be withdrawn and the case be passed to issuance. If the Examiner should have any questions or otherwise feel it would move prosecution forward, Applicants respectfully invite the Examiner to contact Applicants' attorney,

at 972-732-1001. No fee is believed due in connection with this filing. However, should one be deemed due, the Commissioner is hereby authorized to charge Deposit Account No. 50-1065.

Respectfully submitted,



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